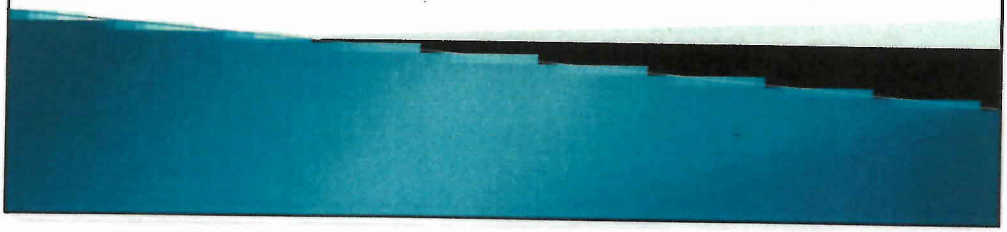
Proposed Rule: Reassessment of PCB Use Authorizations

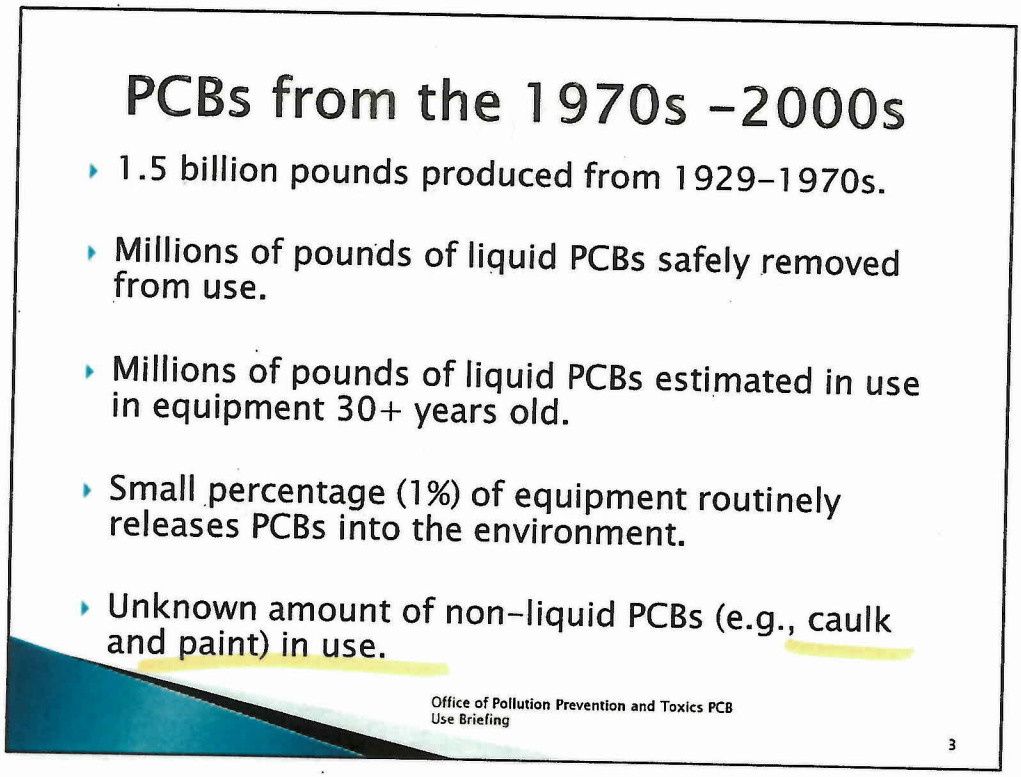
Briefing for Jim Jones
September XX, 2012



Purpose of Briefing

- Provide background on purpose of the proposed rule-making
  - ANPR and comments
- Revisit implications of EO 12866
- Review the sections of the regulations we are considering changing
  - Phase-outs
  - Increased Transparency
  - Removal of unnecessary use authorizations
  - Disposal language clarifications
- Receive guidance from AA heading towards Option Selection.

2



According to utility estimates less than 1% a year routinely release PCBs.

Releases of PCBs Currently in Use

- PCB equipment failure rates increase with age, which increases exposure to humans and the environment.
- No consistent effort to monitor PCB equipment in use.
- USCG records of hundreds of PCB spills every year.
- Examples of PCB exposures:
  - Releases from caulk and fluorescent light ballasts in schools (NYC);
  - Releases into building air from natural gas distribution systems (Chicago); and
  - Releases from electrical equipment due to severe weather events, collisions, and vandalism (Greensburg, Kansas).

PCB Spills Reported to the National Response Center

The units of the data are 'year' and 'number of NRC reports involving PCB's'. For example, in the year 1990 there were 619 NRC reports submitted with PCB involvement.

1990	619
1991	491
1992	389
1993	426
1994	353
1995	240
1996	142
1997	106
1998	97
1999	156
2000	206
2001	309
2002	325
2003	358
2004	283
2005	262
2006	253
2007	193
2008	230
2009 (partial)	140

	5578

2010 ANPR: Reassessment of PCB Use Authorizations

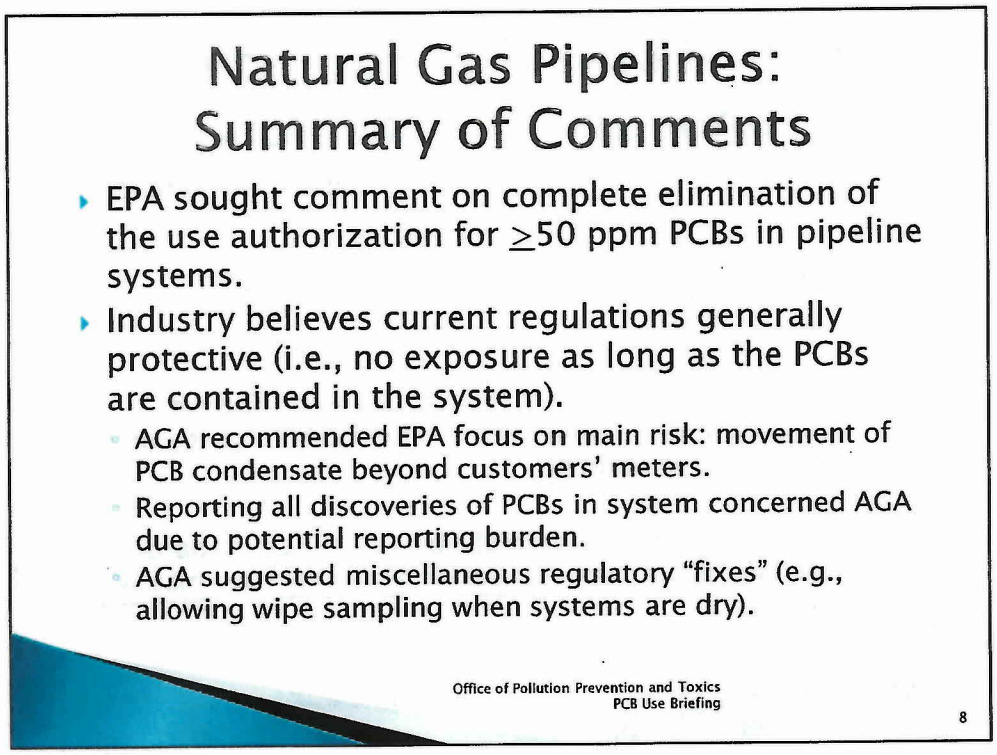
- ANPR Solicited comments and data on:
  - Liquid PCBs in equipment and pipelines
  - 50 ppm level for excluded products
  - Non-liquid PCBs (including caulk)
  - Porous surfaces with PCBs
  - Definitional and marking issues
  - Elimination of most use authorizations at levels ≥50 ppm
  - Lowering the Level of Quantitation (LOQ) from 2 ppm to 1 ppm
- No Congressional or other mandate driving the timing or content of this rulemaking.

Comments on the ANPR

- 242 Comments in docket; about 148 individual commenters
- Major groups of commenters
  - Electrical utilities (industry)
  - Natural gas transmitters and distributors (e.g., INGAA, AGA)
  - Parents and workers in New York City schools (caulk)
  - Governments (DOE, Mass. DEP; Washington State DEP)
  - Recycled paper producers (Color & Pigment Manuf. Assn.)
  - Metal/plastic recyclers (e.g., ISRI, MBA Polymers)

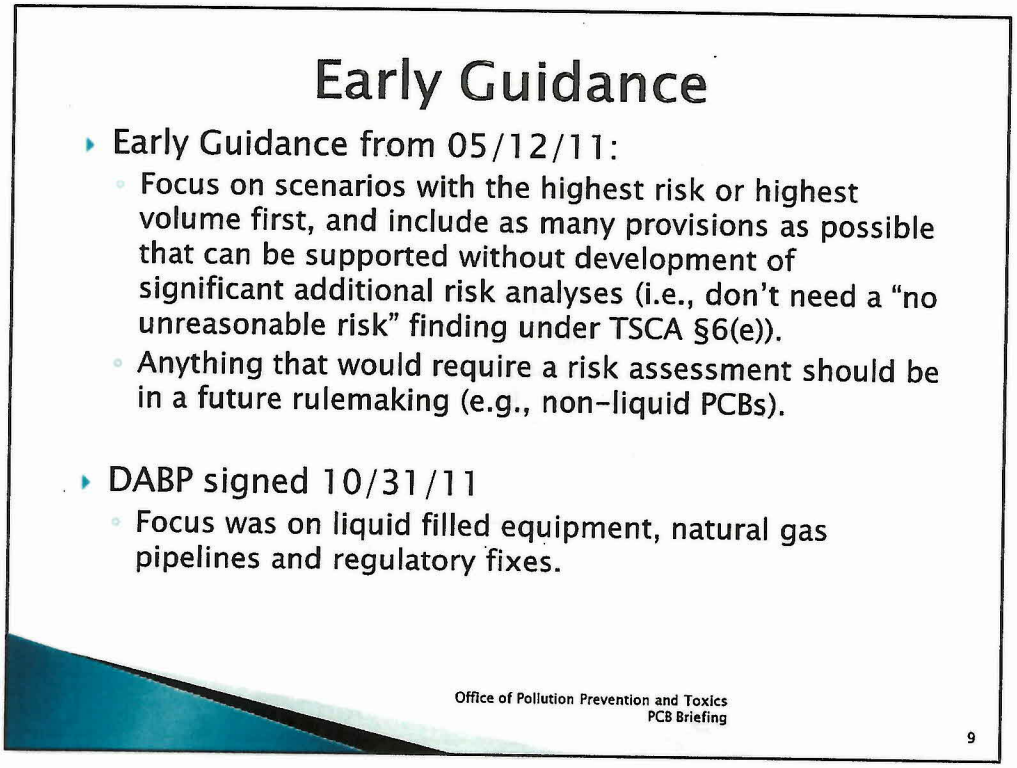
Liquid-Filled PCB Equipment: Summary of Comments

- Industry: EPA is unnecessarily concerned about any potential increase of releases which is very small.
- Industry: Attrition based phase-out is predicted to be complete by 2030.
- Citizen: EPA should require a robust public notification process, with strong requirements for effective signage on all PCB-containing equipment.
- Citizen: Because of the extremely low PCB concentrations mandated in TMDLs, a phase-out of remaining uses may be warranted.



Industry commented it would be prohibitively expensive to tear out and replace their systems, if we got rid of the use authorization

- NPCD has since collected data from a sample of 21 companies and found that the burden for this is modest (an annual average of 2 reports per company).
- The Regions want this data to identify PCB hotspots for enforcement.



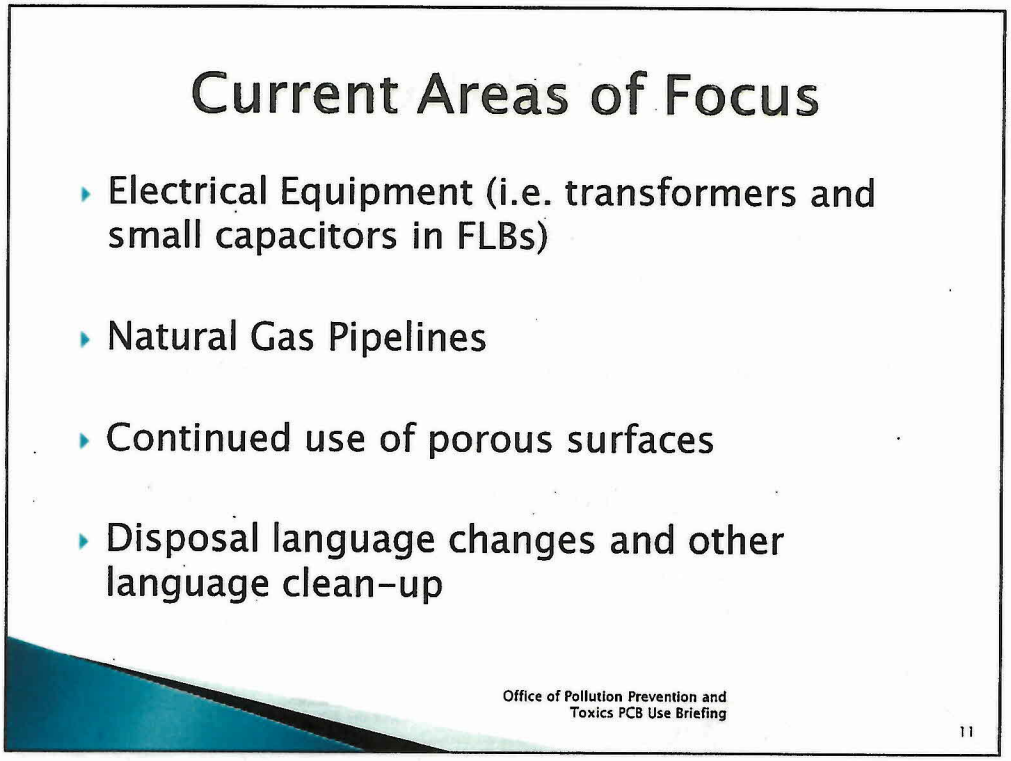
Focus on high risk and high volume scenarios that can be supported without risk analysis to support NUR finding.
Develop as quickly as possible.

Final DABP signed on 10/31/11.

Rulemaking Approach

- Revisit Existing Use Authorizations per EO 13563
  - Remove use provisions no longer necessary (e.g., use authorizations for equipment that is no longer being used – analogous to SNUR).
  - Incorporate regulatory fixes where decades of experience shows that provisions need updating.
- The standard for removing or amending use authorizations is "not arbitrary and capricious"
  - PCBs are already banned by statute; therefore no need for EPA to make the more rigorous "unreasonable risk" finding to remove a use authorization.
  - Need to demonstrate that assumptions/analyses supporting the previous findings of no unreasonable risk no longer hold.
- Compliance with EO 12866 requires an assessment of costs and benefits
  - Some costs and benefits are difficult to quantify.
  - The less costly the rule (e.g., less than $100 M), the less quantification expected (consulted with OP).

13563 is (Improving Regulation and Regulatory Review)



- Use authorizations for PCB Electrical Equipment with units still widely used today
  - <900,000 transformers ≥50 ppm estimated in use by 2015.
  - >500,000 small capacitors in FLBs estimated in use by 2015.
- Use authorizations for PCB Electrical Equipment with few or no units remaining
  - RR Transformers, Mining Equipment, Heat Transfer and Hydraulic Systems, Electromagnets, Large Capacitors, Voltage Regulators, Circuit Breakers, Switches, Reclosers, Rectifiers and Cable)
- Continued use of Contaminated Porous Surfaces (usually associated with spills from electrical equipment).

Economic and Use Analysis

- Four dossiers on current trends in PCB use in electrical equipment, as well as exposure trends and disposal capacity.
- Conducted preliminary cost estimates of various options.
- Met with Office of Policy, including the National Center for Environmental Economics to discuss expectations for level of quantification of benefits.

Exposure/Benefits Assessment

- Liquid-filled Equipment
  - Existing exposure data is limited to the spill data reported to the National Response Center (4,000 spills since 1991).
  - Data on estimated releases per transformer (1982 RIA).
  - Estimate for exposure reduction will be based on releases avoided per piece of equipment retired prior to natural rate of attrition.
- Pipelines/Porous Surfaces/PCB-Contaminated Transformers
  - Benefits of reporting would be enhanced public knowledge and transparency.

Approaches Under Consideration

- Remove or Phase-out use authorizations in accordance with natural attrition rates, where costs are low, or where equipment no longer exists.
- Increase transparency: require users to provide data to public about location of PCB use, where direct phase-out is costly.
- Clarify disposal language based on ANPR comments.

Remove Use Authorizations

- Remove use authorizations for electrical equipment with no or few units left:
  - Railroad transformers
  - Heat Transfer Equipment
  - Large Capacitors
  - Cable
  - Rectifiers
  - Voltage Regulators
  - Mining Equipment
  - Hydraulic Systems
  - Reclosers
  - Electromagnets
  - Switches
  - Circuit Breakers
- Limit use authorizations based on new information
  - Contaminated porous surfaces
  - Pipelines

Phase-outs: Relatively Low Cost

- PCB Transformers (≥ 500 ppm)
  - Phase-out costs for remaining PCB transformers much lower than with original electric equipment rule in 1982.
  - Costs are lower due to decrease in universe of regulated equipment, therefore; it is now reasonable to phase them out.
- Porous Surfaces
  - Only a limited number of these sites based on a survey of the regional PCB coordinators.
  - Either notification or limits to use authorization would be very low cost.
- Small Capacitors
  - Department of Energy rule will make existing inefficient bulbs used in PCB FLBs non-existent or very expensive, so phase-out costs are low (amounts to the costs of locating them).

Increase Transparency

- PCB-Contaminated Transformers (≥50 - <500 ppm)
  - Require registration with EPA when equipment comes in for servicing. Make this data publically available.
- Pipelines
  - Require pipeline owners to notify customers and/or EPA of releases into customer meters and/or notify EPA of any releases and discovery of ≥50 ppm PCBs.
- Porous Surfaces
  - Require deed restrictions as part of property transfers with PCB spills on porous surfaces.

Proposed Schedule

- Draft OS: November 2012
- OS meeting: January 2013
- OS memo: Early 2013
- Begin FAR: Spring2013
- To OMB: May 2013
- From OMB: September 2013
- Publish NPRM: October 2013

Decisions

- Changes to Present Course?
- Given that the rule is estimated to cost less than $100M (see Appendix for preliminary cost estimates), should we assume a less rigorous benefits assessment?
- Given the estimated low cost of the rule, should we explore more ambitious phase-out options? (e.g. PCB-contaminated transformers)
- Other issues or concerns? Relationship to ECOS pigments interest?


Appendix
20

Transformers Regulatory Classification

- PCB Transformers (≥ 500 ppm)
  - Askarel transformers (originally designed to be over 500 ppm and labeled as such).
  - Many non-askarel transformers were topped off with Askarel dielectric fluid and became PCB Transformers.
- PCB-contaminated Transformers (≥ 50 - < 500 ppm)
  - Commonly referred to as mineral-oil transformers.
- Non- PCB Transformers (< 50 ppm)

Transformers Cost Assumptions

- In 1982, costs for phase-out calculated based on early replacement.
  - Replacement cost is net present value of cost of replacement from the proposed regulation versus a baseline attrition scenario.
- Virtually all $\geq$50 ppm transformers will be disposed of by 2030 according to USWAG's estimates.
  - Setting a phase-out date of 2030 (i.e., 15 years from final rule), should yield minimal costs.
- Transformer replacement costs currently do not include energy efficiency gains that would offset current costs.

Costs are based on the number of units remaining in 2014 (anticipated date of final rule)

Options: Low Cost vs. High Cost

OMB considers a rule significant when total costs/savings = $100 M

REGULATED ENTITY	LOW COST OPTION	HIGH COST OPTION
PCB Transformers (≥ 500 ppm)	$0.7M (withdraw use auth. (5yrs)	$2.6M (reclass. 1-year)
PCB-Contaminated Transformers (≥ 50 - < 500 ppm)	$0.3M (register when brought in for service)	$23.5M (no servicing except to reclass. after effective date)
RR Transformers	$0.0M (w/d use auth. in 1-yr)	
Mining Equipment	$0.0M (w/d use auth. in 1-yr)	
Heat Transfer Equip.	$0.0M (w/d use auth. in 1-yr)	
Hydraulic Systems	$0.0M (w/d use auth. in 1-yr)	
Electromagnets	$0.0M (w/d use auth. in 1-yr)	
Voltage Regulators	$231.00 (register)	$2,656.00 (w/d use auth. in 1-yr)
Switches	$795.00 (register)	$0.02M (w/d use auth. in 1-yr)
Natural Gas Pipelines	$0.03 M (notify customers only of ≥50 ppm in customer meters)	$0.05M (notify EPA of any instance ≥50 ppm)
Large Capacitors	$0.0M (w/d use auth. in 5-yrs)	
FLB's (small caps)	$3.8M (w/d use auth. in 5-yrs in schools only and require suvey)	$148.3M (w/d use auth. in 1-year in schools and comm. Bldgs and require survey)
Circuit Breakers	$710.00 (w/d use auth. in 1-yr)	
Reclosers	$0.0M (w/d use auth. in 1-yr)	
Liquid-filled Cable	$0.0M (w/d use auth. 1-yr)	
Porous Surfaces	< $100 (EPA notification)	$0.06M (1-yr use restriction & notification)
Rectifiers	$0.02M (w/d use auth. in 5-yrs)	$0.08M (w/d use auth. in 1-yr)
TOTAL	$4.85M	$174.6M

23